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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,651	04/07/2005	Kuniaki Utsumi	2005_0512A	9001
53349 7590 06/05/2009 WENDEROTH, LIND & PONACK L.L.P. 1030 15th Street, N.W. Suite 400 East Washington, DC 20005-1503				
EXAMINER				
PHU, SANH D				
ART UNIT		PAPER NUMBER		
2618				
MAIL DATE		DELIVERY MODE		
06/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,651

**Applicant(s)**

UTSUMI ET AL.

**Examiner**

SANH D. PHU

**Art Unit**

2618

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-13,16-24,45 and 48-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,5-13 and 16-24 is/are allowed.
- 6) ☒ Claim(s) 45 and 50 is/are rejected.
- 7) ☒ Claim(s) 48 and 49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/25/07&5/19/08 & 4/7/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 5/19/09. Accordingly, claims 1, 2, 5-13, 16-24, 45 and 48-50 are currently pending; and claims 3, 4, 14, 15, 25-44, 46, 47, 51 and 52 are canceled.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 45 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (7,366,150), (newly-cited), in view of Aburakawa et al (2003/0007214), (previously-cited).

-Regarding claim 45, Lee et al discloses a sub-station (140) (see figure 2, col. 6, line 12 to col. 8, line 15) for use in a wireless communication system wherein the sub-station forms a wireless communication area (100) in a local area, and communicates with a wireless communication terminal (120) present in the wireless communication area formed by the sub-station, wherein in the wireless communication system, signals (outputted from (460)) to be input from an outside of the local area to an inside of the local area are converted by a plurality of access relay apparatuses (440, 420) to a signal form for use in the local area, and one of the signals is selected, (by (420)), and output to the sub-station, wherein the sub-station comprises:

a signal receiving section (included in (146)) operable to receive the selected and output signal, wherein the signal to be input from the outside of the local area to the inside of the local area is converted, via (422), to a signal in an optical signal form, and the optical signal is selected and output, wherein the signal receiving section receives the signal converted to the optical signal form, wherein the sub-station further comprises an electrical conversion section (included in (146)) operable to convert the signal received by the signal receiving section to an electrical signal form, (see col. 6, lines 43-48, 58-64),

wherein the sub-station further comprises:

a signal transmitting section (included in (144)) operable to transmit signal transmitted by the wireless communication terminal and received by the sub-station, to an outside of the wireless communication area formed by the sub-station; and an optical conversion section (included in (144)) operable to convert the signal received by the radio wave signal receiving section to an optical signal form, and wherein the signal transmitting section transmits the optical signal converted by the optical conversion section to the outside of the wireless communication area formed by the sub-station, (see col. 6, lines 37-42, 63-67).

Lee et al does not teach that the sub-station comprises a radio wave signal transmitting section operable to transmit the signal received by the signal receiving section to the wireless communication terminal present in the wireless communication area in the form of a wireless radio wave, wherein the radio wave signal transmitting

section transmits the signal converted by the electrical conversion section to the wireless communication terminal in the form of a wireless radio wave, as claimed, and does not teach that the sub-station comprises a radio wave signal receiving section operable to receive the signal transmitted by the wireless communication terminal, as claimed.

Lee et al teaches that the sub-station transmits, via an antenna, the signal received by the signal receiving section to the wireless communication terminal present in the wireless communication area in the form of a wireless radio wave, wherein the sub-station transmits the signal converted by the electrical conversion section to the wireless communication terminal in the form of a wireless radio wave (see col. 6, lines 43-48), and that the sub-station receives, via the antenna, the signal transmitted by the wireless communication terminal (see col. 6, line 37-42).

Aburakawa et al teaches procedures or wirelessly transmitting and receiving radio wave, wherein the procedures comprises a radio wave signal transmitting section (included in ((22)) of receiving and process a radio wave signal for transmission to an antenna, and a radio wave signal receiving section (included in ((22)) of receiving a radio wave signal from the antenna for further processing (see figure 1, [0010, 0012]).

Since Lee et al does not teach in detail how the signal received by the signal receiving section is transmitted by the sub-station to the wireless communication terminal, and does not teach in detail how the signal transmitted by the wireless communication terminal is wirelessly received by the sub-station, it would have been

obvious for one skilled in the art to implement, or alternatively implement, Lee et al, as taught by Aburakawa et al, in such a way that the sub-station would comprise a radio wave signal transmitting section operable to process and transmit the signal received from the signal receiving section to the wireless communication terminal present in the wireless communication area in the form of a wireless radio wave via the antenna, wherein the radio wave signal transmitting section transmits the signal converted by the electrical conversion section to the wireless communication terminal in the form of a wireless radio wave, and the sub-station would comprise a radio wave signal receiving section operable to receive the signal transmitted by the wireless communication terminal from the antenna for delivering it to the signal transmitting section, so that the signal received by the signal receiving section would be transmitted by the sub-station to the wireless communication terminal, and the signal transmitted by the wireless communication terminal would be wirelessly received by the sub-station for delivering the signal transmitting section, as required and expected, and the implementation would become another embodiment derived from teachings of Lee et al and Aburakawa et al.

-Regarding claim 50, Lee et al in view of Aburakawa et al does not teach that the signal receiving section and the radio wave signal transmitting section are accommodated in a first housing, and the signal transmitting section and the radio wave signal receiving section are accommodated in a second housing, as claimed.

Lee et al in view of Aburakawa et al teaches that the signal receiving section is included in a first housing (146), and the signal transmitting section is included in a second housing (144), (see Lee et al, figure 2).

Since Lee et al in view of Aburakawa et al does not teach in detail how the radio wave signal transmitting section and the radio wave signal receiving section are housed, it would have been obvious for one skilled in the art, within his skills and upon design preference, to implement, or alternatively implement, Lee et al invention in view of Aburakawa et al, in such a way that the signal receiving section and the radio wave signal transmitting section are accommodated in the same first housing, and the signal transmitting section and the radio wave signal receiving section are accommodated in the same second housing, so that the implementation would become another embodiment derived from teachings of Lee et al and Aburakawa et al.

***Allowable Subject Matter***

4. Claims 1, 2, 5-13 and 16-24 are allowed.
5. Claims 48 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 05/19/09 have been fully considered.

As results, claims 1, 2, 5-13, 16-24, 48 and 49 are indicated allowable set forth above; and the previous claim rejections have been withdrawn.

Claims 45 and 50, however, are deemed not allowable because of reasons set forth above in this Office Action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANH D. PHU whose telephone number is (571)272-7857. The examiner can normally be reached on M-Fr from 8:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanh D Phu/  
Primary Examiner  
Art Unit 2618